

Amendments to the Claims:

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A high-pressure mercury vapor discharge lamp comprising a lamp vessel made of a transparent ceramic material, enclosing a discharge space comprising an ionizable discharge medium and at least two electrodes having electrode tips that are spaced apart at a mutual distance d , and electrical feed-through elements which extend from the at least two electrodes to an exterior of the lamp, wherein the distance d between the electrode tips is less than 1.0 mm from 0.3 to 0.8 mm and a mercury density in the lamp vessel is higher than 0.3 mg/mm^3 .

2-3 (Canceled)

4. (Previously Presented) The lamp as claimed in claim 1, wherein the mercury density in the lamp vessel ranges from 0.3 to 0.8 mg/mm^3 .

5. (Previously Presented) The lamp as claimed in claim 1, wherein the mercury density in the lamp vessel range from 0.4 to 0.7 mg/mm^3 .

6. (Previously Presented) The lamp as claimed in claim 1, wherein the lamp vessel comprises a bulging section communicating with at least two feed-through channels having an inner diameter smaller than the bulging section.

7. (Previously Presented) The lamp as claimed in claim 6, wherein the bulging section is substantially cylindrical over the distance d and has an internal cross-sectional diameter D_i ranging from 1.5 to 4.5 mm and a length L ranging from 4 to 8 mm.

8. (Previously Presented) The lamp as claimed in claim 6, wherein a wall load inside of the lamp vessel during operation ranges from 40 to 150 W/cm².

9. (Previously Presented) The lamp as claimed in claim 1, wherein the ceramic material is chosen from the group consisting of sub-micro polycrystalline aluminum (PCA), yttrium aluminum garnet (YAG), Y₂O₃, MgAl₂O₄, and aluminum nitride (AlN).

10. (Previously Presented) A lighting apparatus, comprising a main body and at least the lamp of claim 1.

Claims 11-20 (Canceled)

21. (New) A high-pressure discharge lamp comprising:
a discharge space including an ionizable discharge medium and at least two electrodes having electrode tips which are separated by distance d ;
a lamp vessel enclosing the discharge space; and
feed-through elements which extend from the at least two electrodes to an exterior;
wherein the distance d between the electrode tips is from 0.3 to 0.8 mm.

22. (New) The high-pressure discharge lamp of claim 21, wherein the ionizable discharge medium includes mercury having a density from 0.3 to 0.8 mg/mm³.

23. (New) The high-pressure discharge lamp of claim 21, wherein the ionizable discharge medium includes mercury having a density from 0.4 to 0.7 mg/mm³.

24. (New) The high-pressure discharge lamp of claim 21, wherein the lamp vessel comprises a bulging section communicating with at least two feed-through channels having an inner diameter smaller than the bulging section.

25. (New) The high-pressure discharge lamp of claim 24, wherein the bulging section is substantially cylindrical over the distance d and has an internal cross-sectional diameter D_i ranging from 1.5 to 4.5 mm and a length L ranging from 4 to 8 mm.

26. (New) The high-pressure discharge lamp of claim 21, wherein a wall load inside of the lamp vessel during operation ranges from 40 to 150 W/cm².

27. (New) The high-pressure discharge lamp of claim 21, wherein the lamp vessel is made of a transparent ceramic material chosen from a group consisting of sub-micro polycrystalline aluminum (PCA), yttrium aluminum garnet (YAG), Y₂O₃, MgAl₂O₄, and aluminum nitride (AlN).

28. (New) A high-pressure discharge lamp comprising:
a discharge space including an ionizable discharge medium and at least two electrodes having electrode tips which are separated by distance d ;
a lamp vessel enclosing the discharge space; and
feed-through elements which extend from the at least two electrodes to an exterior;
wherein the ionizable discharge medium includes mercury having a density from 0.3 to 0.8 mg/mm³.

29. (New) The high-pressure discharge lamp of claim 28, wherein the distance d between the electrode tips is from 0.3 to 0.8 mm.

30. (New) The high-pressure discharge lamp of claim 28, wherein the distance d between the electrode tips is from 0.3 to 0.6 mm.